

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/020580

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C51/48 C07C59/01 C07C57/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 6 180 827 B1 (LEE FU-MING ET AL) 30 January 2001 (2001-01-30) abstract | 1-7 |
| A | US 6 281 386 B1 (ESCH MARC ET AL) 28 August 2001 (2001-08-28) abstract | 1-7 |
| A | US 5 705 688 A (FAUCONET MICHEL ET AL) 6 January 1998 (1998-01-06) abstract | 1-7 |

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

17 November 2004

Date of mailing of the international search report

02/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Molina de Alba, J

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/020580

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|----|---------------------|----------------------------|---------------------|
| US 6180827 | B1 | 30-01-2001 | AU 2491999 A | 16-08-1999 |
| | | | CN 1294573 T | 09-05-2001 |
| | | | EP 1068173 A1 | 17-01-2001 |
| | | | TW 460309 B | 21-10-2001 |
| | | | WO 9938834 A1 | 05-08-1999 |
| | | | ID 23310 A | 05-04-2000 |
| | | | ZA 9900808 A | 02-08-1999 |
| US 6281386 | B1 | 28-08-2001 | FR 2756280 A1 | 29-05-1998 |
| | | | AU 5227398 A | 22-06-1998 |
| | | | BR 9713102 A | 28-03-2000 |
| | | | CA 2272461 A1 | 04-06-1998 |
| | | | CN 1238754 A | 15-12-1999 |
| | | | EP 0946486 A1 | 06-10-1999 |
| | | | WO 9823573 A1 | 04-06-1998 |
| | | | JP 2000507616 T | 20-06-2000 |
| | | | JP 3568209 B2 | 22-09-2004 |
| US 5705688 | A | 06-01-1998 | FR 2736912 A1 | 24-01-1997 |
| | | | AT 178308 T | 15-04-1999 |
| | | | CA 2181508 A1 | 19-01-1997 |
| | | | CN 1143069 A ,B | 19-02-1997 |
| | | | CZ 9602141 A3 | 12-02-1997 |
| | | | DE 69601902 D1 | 06-05-1999 |
| | | | DE 69601902 T2 | 19-08-1999 |
| | | | DK 754671 T3 | 18-10-1999 |
| | | | EP 0754671 A1 | 22-01-1997 |
| | | | ES 2132854 T3 | 16-08-1999 |
| | | | GR 3030552 T3 | 29-10-1999 |
| | | | JP 3053575 B2 | 19-06-2000 |
| | | | JP 9118645 A | 06-05-1997 |
| | | | KR 205270 B1 | 01-07-1999 |
| | | | SG 52823 A1 | 28-09-1998 |